

2/2 026

UNCLASSIFIED

PROCESSING DATE--23 OCT 70

CIRC ACCESSION NO--AT0119981

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. K SUB2 S SUB2 O SUB4 INITIATED POLYMN. OF METHACRYLIC ACID (I) IN AQ. MEDIA AT 50DEGREES IN THE PRESENCE OF POLYETHYLENE GLYCOL (II) OF VARIOUS MOL. WTS. WAS STUDIED TO ESTABLISH THAT THE PROPOSED COOPERATIVE INTERACTION BETWEEN THE GROWING POLY(METHACRYLIC ACID) (III) CHAIN AND THE II MATRIX AROSE FROM H BONDING BETWEEN CO SUB2 H GROUPS AND II O ATOMS. THE POLYMN. RATE OF I FELL GREATER THAN 10 TIMES AS II MOL. WT. INCREASED FROM SIMILAR TO 100 TO SIMILAR TO 10,000. LOW MOL. WT. II DID NOT FORM STRONG COMPLEXES WITH III AS SHOWN BY INDEPENDENCE OF THE REDUCED VISCOSITY OF III IN THE PRESENCE OF II ON II MOL. WT. LESS THAN 1000. THE INITIAL RATE WAS INDEPENDENT OF II CONCN. APPARENTLY, III MUST ATTAIN SUFFICIENT LENGTH FOR COOPERATIVE INTERACTION WITH II BEFORE POLYMN. CONTINUES ON THE MATRIX. AFTER ATTAINING A 3-4PERCENT YIELD (BASED ON II) OF III OR ADDING THE CALCD. AMT., THE POLYMN. RATE INCREASED TO THAT OBSD. IN THE ABSENCE OF II. AT HIGH PH, WHERE MONOMER AND III CHAINS WERE IONIZED, THE REACTION RATES IN THE PRESENCE AND ABSENCE OF II COINCIDE; BUT WITH LOWERING OF PH, THE RATE INCREASED INSIGNIFICANTLY IN THE PRESENCE OF II WHILE THE RATE IN THE ABSENCE OF II INCREASED. FACILITY: MOSK. GOS. UNIV. IM. LOMONOSOVA, MOSCOW, USSR.

UNCLASSIFIED

1/2 011 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--ACIDITY OF FLUORINE CONTAINING CATALYSTS POISONED WITH PYRIDINE
STUDIED IN A PULSED MICROCATALYTIC SYSTEM -U-
AUTHOR-(02)-ANTIPINA, T.V., YUSCHENKO, V.V.

COUNTRY OF INFO--USSR

SOURCE--KINET. KATAL. 1970, 11(1), 134-8

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CATALYST POISONING, FLUORINE, PYRIDINE, CATALYST ACTIVITY,
CUMENE, CATALYTIC CRACKING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/0831

STEP NO--UR/0195/70/001/001/0134/0138

CIRC ACCESSION NO--AP0119735

UNCLASSIFIED

2/2 011

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0119735

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CATALYTIC ACTIVITY AND ACIDITY OF 2 SERIES OF CATALYSTS, DIFFERING IN CHEM. COMPN. AND STRUCTURE (AIF SUB3, AIF SUB3.AIOHF SUB2, ETC.), AS WELL AS HODRY CATALYST AND ZEOLITE HY, INCREASED SYMBATICALLY WITH INCREASING CONC. OF F IN THESE CATALYSTS. THE CATALYTIC ACTIVITY WAS STUDIED FOR THE CRACKING OF CUMENE AT 370-400DEGREES. FACILITY: KHIM. FAK., MOSK. GOS. UNIV. IM. LOMONUSOVA, MOSCOW, USSR.

UNCLASSIFIED

1/2 019 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--ADSORPTION OF BENZENE AND METHANOL VAPORS ON ALUMINUM
HYDROXYFLUORIDES -U-
AUTHOR-(02)-BULGAKOV, O.V., ANTIPINA, T.V.
COUNTRY OF INFO--USSR
SOURCE--VESTN. MOSK. UNIV., KHIM. 1970, 11(1), 27-31
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--GAS ADSORPTION, BENZENE, METHANOL, ISOTHERM, ALUMINUM
COMPOUND, FLUORIDE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1997/0598 STEP NO--UR/0189/70/011/001/0027/0031
CIRC ACCESSION NO--AP0119516
UNCLASSIFIED

2/2 019

UNCLASSIFIED

PROCESSING DATE--2300T70

CIRC ACCESSION NO--AP0119516

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ADSORPTION WAS STUDIED AT 20 DEGREES FOR SAMPLES CONTG. DIFFERENT F CONCN. BY USING A MACHAIN GAKRA BALANCE APP. THE RESULTING ISOTHERMS WERE TREATED BY USING THE BET EQUATION, AND FOR C SUB6 H SUB6 THERE WAS A DIFFERENCE IN THE STRUCTURAL CHARACTERISTICS AS A FUNCTION OF THE F CONCN. AN INCREASE IN F RESULTS IN A DECREASE IN THE CAPACITY OF THE MONOLAYER, IN THE ADSORPTION POTENTIAL, AND IN THE TOTAL PORE VOL., WHEREAS THE VALUE OF THE PREDOMINANT PORE SIZE IS ALMOST INDEPENDENT OF THE F CONCN. FOR MEQH THE PREDOMINANT PORE RADIUS IS SIMILAR TO THE VALUES FOUND FOR C SUB6 H SUB6. HOWEVER, AS THE F CONCN. IS INCREASED THE TOTAL PORE VOL. INCREASES AND THE VALUE OF THE SP. SURFACE, DETD. BY THE THERMODYNAMIC METHOD (A. KISELEV, USP. KHIM. 1945, 14, 367), IS NOT RELATED AT ALL TO THE F CONCN. THE DIFFERENCE IN THE ADSORPTION PARAMETERS, DETD. FROM THE C SUB6 H SUB6 AND MEQH ISOTHERMS, IS DUE TO THE DIFFERENCE IN THE NATURE OF THE INTERACTION OF THESE MOLS. WITH THE SURFACE.

UNCLASSIFIED

1/2 022 UNCLASSIFIED PROCESSING DATE--0200170
TITLE--ALKYLATION OF TOLUENE BY PROPYLENE ON FLUORINE CONTAINING CATALYSTS
-U-
AUTHOR--(03)-KHABIBULLAYEVA, E., TRESHCHOVA, YE.G., ANTIPINA, T.V.
COUNTRY OF INFO--USSR
SOURCE--IZVESTIYA 1970, 10(1), 34-6
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ALKYLATION, TOLUENE, PROPYLENE, FLUORINE, ALUMINUM OXIDE,
CATALYST, ISOMER, GAS CHROMATOGRAPHY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1992/1372

STEP NO--UR/ 0204/70/015/001/0034/0145

CIRC ACCESSION NO--AP0112952

UNCLASSIFIED

2/2 022 UNCLASSIFIED PROCESSING DATE--J20CT70
CIPC ACCESSION NO--AP0112352
ABSTRACT/EXTRACT--(U) GP-D- ABSTRACT. TOLUENE AND PROPYLENE AT 3:1 MOLAR
RATIO WERE PASSED 1 HR AT ATM. PRESSURE AND A TOLUENE SPACE VELOCITY OF
0.3 HR PRIME NEGATIVE1 OVER AL OXYFLUORIDE CONTG. 56.5PERCENT F (I),
FLUORINATED AL SUB2 O SUB3 (6.4PERCENT F) (II), AND CGM. BOUNDRY
CATALYST (III). MAX. YIELDS OF MIXED CYMENES, BASED ON TOLUENE, WERE:
I, 20 WT. PERCENT AT 240DEGREES; II, 21PERCENT AT 240DEGREES; III,
15PERCENT AT 240DEGREES. MAX. WT. YIELDS OF THE O, A, AND P ISOMERS,
DETD. BY GAS LIQ. CHROMATOG. WERE AS FOLLOWS AT THE TEMP. GIVEN: (I),
30, 220; 60, 330; 50, 240; (II) 25, 220, 60, 300, 50, 240; (III), 30,
240; 40, 280; 60, 240.

UNCLASSIFIED

1/2 019 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--KINETIC PRINCIPLES OF CATALYTIC REACTIONS IN A PULSE MICROMETHOD
-U-
AUTHOR-(02)-ANTIPINA, T.V., YUSHCENKO, V.V.
COUNTRY OF INFO--USSR
SOURCE--DOKL. AKAD. NAUK SSSR 1970, 191(4), 849-51 (PHYS CHEM)
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--REACTION KINETICS, CATALYSIS, PRESSURE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3005/0214

STEP NO--UR/0020/70/191/004/0849/0851

CIRC ACCESSION NO--AT0132486

2/2 019

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AT0132486

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN EQUATION IS GIVEN WHICH CAN BE USED TO DESCRIBE THE KINETICS FOR CATALYTIC REACTIONS WHICH ARE RETARDED BY THE REACTION PRODUCTS OVER A WIDE RANGE OF PRESSURES FOR THE REACTANTS IN THE INITIAL PULSE. THIS MAKES IT POSSIBLE TO STUDY THE KINETIC RULES FOR CATALYTIC PROCESSES IN THE INTERMEDIATE RANGE, BOUNDED BY THE VALUES OF THE RETARDATION COEFF. OF BETA EQUALS 0 AND BETA EQUALS 1.0, WHICH HAS BEEN STUDIED VERY LITTLE. FACILITY: MOSK. GOS. UNIV. IM. LOMONOSOVA, MOSCOW, USSR.

USSR

UDC: 542.973.2

BULGAKOV, I.V., ANTIPIINA, T.V., Department of Physical Chemistry, Moscow State University imeni M.V. Lomonosov, Moscow, Ministry of Higher and Secondary Specialized Education RSFSR

"Investigation of the Adsorption of Benzene and Methanol Vapors on Aluminum Hydroxyfluorides"

Moscow, Vestnik Moskovskogo Universiteta, Seriya II, Khimiya, Vol 11, No 1, Jan./Feb 70, pp 27-31

Abstract: The authors studied the adsorption of benzene and methanol vapors on specimens of aluminum hydroxyfluoride with different fluorine concentrations. It was found that an increase in the concentration of fluorine in the specimens results in reduced capacity of the monolayer, adsorption potential and total pore volume, whereas the prevailing pore radius is practically independent of fluorine concentration. As the capacity of the monolayer decreases, so does the specific surface. It was found that a certain quantity of adsorbed methanol is held quite strongly by the specimens at high temperatures (300°C), irreversible adsorption increasing with an increase of fluorine concentration in the specimens. There was a considerable difference in the adsorption parameters determined from the isotherms of adsorption for benzene and methyl alcohol, probably because of the difference in the nature of interaction of benzene and methanol molecules with the surface of the specimens.

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UDC

621.385.1.01.01

AMALGAM, A. M., LAFINOVA, A. M.

"Flux-Paint for Fixing Printed Circuit Boards"

Uch. Znan. Obyekt v radioelektronosti (Experience Working in the Field of Industry--collection of works), Vyp. 6, Moscow, 1970, pp 14-15. (Uch. Znan. Obyekt, No 10, Oct 70, Abstract No 10V272)

Translation: A flux-paint is proposed which acts simultaneously as a flux-paint during etching, and a flux coating during soldering and assembly of units and assemblies on circuit boards. The flux-paint contains solutions of resin in ethyl alcohol, polyester resin, and methylethylketone in a 2-5% solution of resin in alcohol. Resumé.

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- 1P -

USSR •

UDC 621.373:535.66

ANTIPOV, B. A., ZUMEV, V. YE., PYRSIKOVA, P. D., SAPOZHNIKOVA,
V. A.

"Investigation of the Shape of the Methane Absorption Line Using a
Laser Controlled by a Magnetic Field"

Leningrad, Optika i Spektroskopiya, No 6, Dec 71, pp 699-701

Abstract: The shape of the methane absorption line with center 2947.828 cm^{-1} at methane pressures from 1 to 6 mm Hg was investigated. It is noted that the resolution of existing spectral devices did not generally give a true picture of the shape of the absorption line. Studies of the distorted shape of the spectral line are of interest to spectroscopists since the shape of the line, more than any other parameter, is sensitive to various intermolecular and intramolecular interactions. A laser is suggested as very promising for the study of the true shape of the line, since the radiation line of the laser is close to the absorption line being studied and it can be tuned by the same method. A He-Ne laser with a wavelength of 3.39μ was used as a radiation source in studying the methane absorption line. The length of the laser resonator was 28 cm and the diameter of the discharge tube did not exceed 4 mm. The laser was

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USSR

ANTIPOV, B. A. et al, Optika i Spektroskopiya, No 6, Dec 71,
pp 899-902

placed in a solenoid of length 76 mm where the magnetic field strength varied from 0 to 600 gauss. The length of the solenoid was three times the length of the gas tube in order to ensure a high homogeneity of the magnetic field inside the tube. Values of the integral intensity and the half-width of the line were found to be $1.1 \pm 0.1 \text{ atm}^{-1} \cdot \text{cm}^{-1}$ and $0.0045 \pm 0.0004 \text{ cm}^{-1}$, respectively. Both single-frequency and multimode helium-neon lasers were used in the measurements. It is claimed that the technique makes it possible to study the effect of partial pressures of various gases, temperature, and total pressure on the change in monochromatic absorption coefficients at the center of the line and at various distances from it. A comparison of experimental and calculated values shows that the shape of the methane absorption line obtained in the experiment may be considered practically undistorted.

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Welding

USSR

UDC 621.774.2

MATVEYEV, Yu. M., MAKAROV, I. P., KRYUKOV, V. N., ZUBEAREVA, V. A., SAMARYANOV, Yu. V., ANTIPOV, B. F., KOZLOV, D. G., and ZIMINA, N. G., Ural Scientific Research Pipe Institute, Vyksunskiy Metallurgical Plant

"Production of Furnace-Welded Pipes With Oxygen Blowing of Skelp Edges"

Moscow, Metallurg, No 1, Jan 71, pp 34-35

Abstract: The quality of furnace-welded pipe is assessed by the welded seam quality, which is a function of the chemical composition of the metal, reduction in the welding pass, heating temperature, and the finish of the edges to be welded. In order to remove the scale and preheat the metal prior to welding, the edges are blown with high-pressure air. Blowing with oxygen makes it possible to raise the temperature of the edges. Oxygen facilitates the melting of refractory oxides and their removal from the surface of the skelp. The use of oxygen for blowing skelp edges on the furnace welding line of the Vyksunskiy Metallurgical Plant resulted in a marked increase in the quality of pipes. The strength of the weld in cone flaring tests was found to increase more than six-fold and the weld structure improved as well. The yearly savings with the use of oxygen on one mill was about 50,000 rubles.
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1/2 021 UNCLASSIFIED PROCESSING DATE--11DEC70
TITLE--CONTROLLED ELECTROLUMINESCENT INDICATORS ON A SEIGNETTE CERAMIC
BASE -U-
AUTHOR--(SS)-ANTIPEV, G.L., DONAYEVA, V.A., SAVELYEV, G.A.
COUNTRY OF INFO--USSR A
SOURCE--IZV. LENINGR. ELEKTROTEKH. IN-TA (BULLETIN OF Leningrad
REFERENCE--EZH-ELEKTRONIKA I YEYE PRIMENIYE, NO 4, APRIL 1970, ABSTRACT NO
DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS, MATERIALS

TOPIC TAGS--ELECTROLUMINESCENCE, CERAMIC MATERIAL

CONTROL WARNING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REL/EPAML--SC08/1527 STEP NO--UR/3074770/0007 1-1 1227 1-1
CIRC ACCESSION NO--AK0134526

2/2 021

UNCLASSIFIED

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CIRC ACCESSION NO--A0138926

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A CONTROLLED INDICATOR IS DESCRIBED IN WHICH THE ELECTROLUMINESCENT AND CONTROL ELEMENT ARE TECHNOLOGICALLY UNITED IN A SINGLE WHOLE. A SIGAETTE OF PAPER AND WHICH IS ALSO THE BASIC INDICATOR, IS USED AS THE CONTROL ELEMENT. CHARACTERISTICS OF THE CONTROL OF SUCH AN INDICATOR ARE PRESENTED.

UNCLASSIFIED

USSR

UDC 621.316.345:621.387.322.3

ANTIPOV, B.L., IZUMRUDOV, O.A., LAZAREVA, N.P., SAVEL'YEV, G.A.

"Production Of Multicolor Electroluminescent Panels"

Izv. Leningr. elektrotekhn. in-ta (Journal Of The Leningrad Electrical Engineering Institute), 1972, Issue 108, pp 175-179 (from RZh:Elektronika i yeye primeneniye, No 11, Nov 1972, Abstract No 11B356)

Translation: A variation was developed of a photographic method of producing electroluminescent panels. A glass substrate with a transparent electrode of stannic oxide is covered by a thin (10--15 micron) layer which is easily dissolved in organic solvents of lacquer (e.g., nitrocellulose). On the surface of the lacquer film a protective stencil is established by the method of photochemical treatment of a photoresist based on polyvinyl alcohol, which cuts off specific sections of the lacquer film. Subsequently, a continuous layer of an electroluminophor with a specified color of luminescence is deposited onto the surface of the substrate. Fixing of the luminophor on the shield photoresist sections is achieved with treatment by the vapors of a lacquer solvent. The unbound luminophor is easily withdrawn from the shielded sections, after which the shield stencil is removed and at the sections of lacquer films which had become exposed the process of fixing a luminophor of another color is repeated.

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USSR

ANTIPOV, B.L., et al., Izv. Leningr. elektrotekhn. in-ta, 1972, Issue 108, pp 175-179

Multicolor panels 0.1--0.2 mm wide can be produced by this method. The merit of the method is the almost total absence of losses of luminophor because the luminophor removed from the sections unrestrained at the substrate is not contaminated by the bonding and can be used a second time without additional cleaning. I.V.

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ANTIPOV, B. V.

MEDICINE

UDC: 616.102-07.616.37-07
23 Nov 71

UDC: 616.102-07.616.37-07

PATHOLOGICAL AND HISTOCHEMICAL INVESTIGATION OF THE PANCREAS AS RELATED TO PERITONITIS

Article by B. V. Antipov, Yu. N. Nikolayev, Institute of Human Morphology, USSR Academy of Sciences, Moscow, Vestnik Akademii Meditsinskikh Nauk SSSR, Moscow, No 10, 1971, pp Bb-93]

Clinical observations and morphological investigations are indicative of the considerable incidence of involvement of the pancreas in the general inflammatory process in the presence of diffuse forms of peritonitis (S.S. Vayl', A.P. Kallavai, N.I. Leporskiy, V.N. Vokresenskiy, N.A. Roshova). However, the essence of many functional and structural disturbances arising in this gland and their significance in the pathogenesis of development of local changes and of the general pathological process have still not been investigated sufficiently.

We made a pathohistological and histochemical investigation of the pancreas in the presence of peritonitis on material used in 22 experiments performed on dogs. Experimental peritonitis was induced in the animals by intraperitoneal administration of a 10% fecal suspension at the rate of 0.5 ml/kg or of a bacterial culture (in doses of 5 to 65 billion bacterial bodies per kg of body weight) incubated under aerobic or anaerobic conditions. No specific treatment was given to the animals. A control series of experiments involved six clinically healthy dogs who were sacrificed (under superficial sodium pentothal anesthesia), by resecting the heart against a background of acute bloodletting through the carotid artery. Immediately after death, pieces of tissue were cut out of different segments of the pancreas. The material was fixed in 10% neutral formalin and Carnoy's fluid. In addition, quick-frozen sections were prepared in a cryostat for investigation of the activity of several enzymes.

Paraffin and colloidal sections were stained with hematoxylin-eosin, picrofuchsin-fuchsein, azan by the Heidenhain method; in sections the PAS reaction with amylose control, nucleoprotein reaction by the methods of Biecher and Paulsen with ribonucleoproteinase control were conducted. The functional activity of acinar and β -cells of the pancreas was studied on sections stained with basic brown combined with light green by the method of M.C. Shublen;

USSR

ANTIPOV, M. V.

"The Correlation Factor of the Full Period of a Pseudosequence"

Vychisl. Sistemy [Computer Systems -- Collection of Works], No 50, Novosibirsk, 1972, pp 143-154 (Translated from Referativnyy Zhurnal, Kibernetika, No 3, Moscow, 1973, Abstract No 3 V288 by the author).

Translation: A formula is produced for calculation of the correlation factor for a multiplicative comparison sensor and certain types of factors are selected which generate pseudosequences with rather high correlation coefficient.

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USSR

UDC: 8.74

ANTIPOV, M. V.

"Optimum Generating Set of a Multiplicative Data Transmitter"

V sb. Veroyatnostn. metody resheniya zadach mat. fiz. (Probabilistic Methods of Solving Problems of Mathematical Physics--collection of works), Novosibirsk, 1971, pp 7-25 (from RZh-Kibernetika, No 8, Aug 72, Abstract No 8V600)

[No abstract]

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USSR

UDC 518.5:681.3.06

ANTIPOV, M. V.

"Evaluation of a Pseudorandom Number Generator"

Vychisl. Sistemy [Computer Systems -- Collection of Works], No 42, Novosibirsk, 1970, pp 81-88, (Translated from Referativnyy Zhurnal, Kibernetika, No 10, 1971, Abstract No 10 V813 by V. Mikheyev).

Translation: The statistical qualities of a pseudorandom number generator consisting of a set of operations realizing a recurrent algorithm for production of the next number are estimated. A generator of the form $r_{n+1} = kr_n \pmod{2^p}$ is studied; r , k and p are integers.

USSR

USSR 621.396.01:621.519.7

ANTHONY, V. A.

"Tropospheric Communications"

Troposferaya svyaz' (ed. English above), Moscow, Voenizdat, 1971, 104 pp., 36 k. (from R&A-Radiotekhnika, No 10, Oct 70, Abstract No 10A1000).

Translation: This book, which is written chiefly for communications engineers, contains a survey of stationary and mobile tropospheric communications facilities. Their tactical and technical characteristics are given as well as a description of systems and individual tropospheric communication lines in operation on various continents and in regions where access is difficult. In particular, the survey covers mobile stations with strategic and tactical applications. Tropospheric communications are compared with other forms of communications. U. S.

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USSR

AGARTANOV, V. N., ANTIPOV, V. B., KOLPAKOV, V. V., FEDORIN, Ye. M., Tomsk State University

"Effect of Intense Optical Emission on the Threshold of Instability of Spin Waves in the Case of Parallel Pumping"

Leningrad, Fizika Tverdogo Tela, Vol 14, No 8, Aug 72, pp 2446-2448

Abstract: A single crystal of yttrium ferrite-garnet in the form of a rectangular prism measuring $3 \times 4 \times 13$ mm, with polished faces, having its axis coincident with crystallographic direction [111] was placed in the center of a reflective cylindrical cavity with TE_{011} mode in such a way that the axis of the specimen coincided with the axis of the cavity. Pumping was by 300- μ s square pulses with a prf of 9.4 GHz. LD71-C8 laser emission was focused normal to the surface of the crystal in the center of the side face. A reduction was observed in the threshold of instability of spin waves which was attributed to the absorption of SHF power by particles knocked from the surface of the specimen into the cavity region where there was a strong alternating electric field.

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USSR

UDC 512.25/.26+519.3:330.115

ANTIPOV, V. I.

"Solution of Particular Problem of Calendar Planning by Method of Comparison of States"

Sistemy Raspredeleniya Resursov na Grafakh [Systems for Distribution of Resources on Graphs -- Collection of Works], Moscow, Acad. Sci. USSR, Computer Center, 1970, pp 7-24, (Translated from Referativnyy Zhurnal, Kibernetika, No 6, 1971, Abstract No 6 V524 by V. Tanayev).

Translation: The problem is studied of constructing a schedule for the process of performing N partially ordered operations, each of which can be performed in the same time period τ requiring one of R equivalent resource units, to achieve maximum speed. Each resource unit after performance of one operation can be used to perform another operation. A phase variable is introduced, characterizing the status of performance of operations. It is suggested that the method of successive analysis of versions be used to find the optimal trajectory in the phase space. The problem is extended to the case when the time of performance of the i th operation by the j th resource is an arbitrary quantity τ_{ij} . The results of a machine experiment are presented.

USSR

UDC 51:330.115

ANTIPOV, V. I.

"Method of Solution of Discrete Problem of Optimal Distribution of Resources on a Graph"

Sistemy Raspredeleniya Resursov na Grafakh [Systems for Distribution of Resources on Graphs -- Collection of Works], Moscow, Acad. Sci. USSR Computer Center, 1970, pp 25-30, (Translated from Referativnyy Zhurnal, Kibernetika, No 6, 1971, Abstract No 6 V555 from the Article).

Translation: The problem of the optimal distribution of resources is formulated as follows. The dependence of the time of performance of each operation t_i on the quantity of resources omitted S_i is known. The total quantity of resources is limited, i.e. $\sum_{i=1}^N S_i \leq C$. Resources must be distributed among operations so that the time of performance of all operations T is minimized.

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USSR

UDC 669.187.2:621.365.5

OKOROKOV, G. N., SHALIMOV, A. G., ANTIPOV, V. M., and TULIN, N. A.

Proizvodstvo Stali i Splavov v Vakuunnykh Induktsionnykh Pechakh (The Production of Steel and Alloys in Vacuum Induction Furnaces), Moscow, Metallurgiya, 1972, 191 pp

Translation of Annotation: The construction of various types of contemporary vacuum induction furnaces is described. Physicochemical processes are described which occur during smelting of steels and alloys in vacuum induction furnaces. Methods are proposed for intensification of reduction and refining of metals. A detailed characterization of the quality of metal is given. The book is intended for scientific workers, engineering-technical personnel, and highly qualified workers of metallurgy factories. It can be useful for students in advanced courses of metallurgical institutions of higher education. 98 illustrations, 64 tables, bibliography of 172 titles.

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OKOROKOV, G. N., et al., The Production of Steel and Alloys in Vacuum Induction Furnaces, Moscow, Metallurgiya, 1972, 191 pp

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USSR

OKOROKOV. G. N., et al., The Production of Steel and Alloys in Vacuum Induction Furnaces, Moscow, Metallurgiya, 1972, 191 pp

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ANTIPOV, K.V.

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111-3. INTERACTION OF THE CONDITIONS OF INTENSE MIXING OF A MELT BY AN
EXTERNAL MOBILE MAGNETIC FIELD FOR GROWTH OF SEMICONDUCTING SINGLE CRYSTALS

[Article by V. V. Antipov, K. M. Morin, M. P. Shapovalov, Moscow: Novosibirsk,
III. Sibirskiy gos. tekhnicheskii universitet, 1972, p. 27]

For purposes of intensification of the growth processes of semiconducting
single crystals which in the molten state are characterized by the metallic type
of electrical conductivity, an external mobile magnetic field of inductive
frequency can be used which in the general case has translational and rotational
components. The basis for this suggestion is the more or less intense
ponderomotive interaction of the magnetic field with the electrically conducting
melt.

The maximum effect is achieved here in the case of the turbulent nature
of mixing of the melt in the hydrodynamic boundary layer.

The theory of the hydrodynamic boundary layer permits establishment of
the region of existence of the turbulent conditions at the crystallization
front for the laminar nature of the basic flow of the melt.

In view of the difficulty of the detailed calculation of the ponderomotive
interaction of the magnetic field with the melt, the theory of approximate
similarity was used which on the basis of studying the behavior of the model
material permits determination of the required parameters of the magnetic field
insuring mixing of any other melt in the given regime.

On the basis of the theoretical relations obtained and the experimental
research on models of materials, the optimal values of the intensity of the
external mobile magnetic field were calculated for various semiconducting
materials.

A comparison of the results obtained with the known published data indicates
their satisfactory correspondence.

USSR

UDC 577.391:547.436

VASIN, M. V., DAVYDOV, B. I., and ANTIPOV, V. V.

"Comparative Elimination of the Radiation-Protective and Toxic Action of Cystamine"

Moscow, Radiobiologiya, Vol 11, No 4, Jul/Aug 71, pp 517-521

Abstract: On the basis of data obtained in experiments on mice, a comparative evaluation of the reduction of the radiation-protective and toxic effects of cystamine in connection with the elimination of this drug was carried out. Methods described by B. I. Davydov in the book Problemy Kosmicheskoy Biologii (Problems of Space Biology), Vol 14, p 137, 1971, were applied. T_{50} of cystamine on irradiation with gamma-rays in a dose of 900 r at a dosage rate of 139 r/min was 0.8 hr on the basis of its radiation-protective effect while it was 1.8 and 2.3 hrs in regard to its toxic action on non-irradiated and irradiated animals respectively. Elimination of S^{35} from the spleen, liver, and entire body of the experimental animals on intraperitoneal administration of ^{35}S -cystamine (= S^{35} -cysteamine) in a dose of 150 mg/kg did not correspond to the reduction in the radiation-protective or toxic effect. While during the first hour after administration there was a close correlation between the protective effect of cystamine and its concentration in

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USSR

VASIN, M. V., et al., Radiobiologiya, Vol 11, No 4, Jul/Aug 71, pp 517-521

organs sensitive to radiation, this correlation became less pronounced during the following 4 hrs. Although during the first hour the concentration of S^{35} -cystamine = S^{35} -cysteamine in radiation-sensitive organs dropped to 55.3-66.0% of the initial level, the toxic action during this time remained practically unchanged. This can be explained in part by the formation from cystamine of products that were more toxic than the parent substance. After the first hour the reduction of the toxic action corresponded more closely to the elimination of S^{35} .

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USSR

UDC 577.1:615.7/9

VASIN, M. V., SAKSONOV, P. P., ANTIPOV, V. V., and SHASHKOV, V. S.

"Antiradiation Effectiveness of Cystamine Under Varying Conditions of gamma-Irradiation"

V sb. Probl. kosmich. biol. (Problems in Space Biology -- Collection of Works), Vol 14, Moscow, "Nauka" (Science), 1971, pp 121-131 (Russian) (from RZh-Biologicheskaya Khimiya, No 20, 25 Oct 71, Abstract No 20F1712 from summary)

Translation: It was established that with intraperitoneal injection of cystamine 5-10 minutes before gamma-irradiation (139-159 roentgens/min) a linear dependence of radioprotective activity (RA), as determined from the cystamine dose reduction factor, on the drug dose is observable. Increasing the time of the injection of cystamine in a dose of 150 mg/kg (30 min before irradiation) had no effect on cystamine RA. Injection of cystamine 1 hour before irradiation sharply lowered -- and 8-12 hours before completely canceled -- cystamine RA. With doses of 50-100 mg/kg a lowering of RA was noted in earlier stages. With irradiation for 1.5-4 hours (total dose 950-1200 roentgens) the RA of cystamine, cystaphos, 5-methoxytryptamine and S, β -aminoethylisothiuronium bromide hydrobromide (AET) declined sharply.

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USSR

UDC 577.1:615.7/9

ANTIPOV, V. V., VASIN, M. V., DAVYDOV, B. I., SAKSONOV, P. P., and SMIRNOVA, N. V.

"Sensitivity of Mice to Radioprotectors From the Amino Thiol and Indolyl Alkyl Amine Series During the Aftereffect of Transverse Overloads"

V'sb. Probl. kosmich. biol. (Problems in Space Biology -- Collection of Works), Vol. 14, Moscow, "Nauka" (Science), 1971, pp 53-57 (Russian) (from RZh-Biologicheskaya Khimiya, No 20, 25 Oct 71, Abstract No 20F1713 from summary)

Translation: Mice were subjected to the action of overloads (centrifugation: 10 and 30 units 15 minutes, 40 units 10 minutes), and cystamine dihydrochloride (I; 180-350 mg/kg), S,B-aminoethylisothiuronium bromide (AET; 160-220 mg/kg), 5-methoxytryptamine (II; 180-240 mg/kg) or monosodium salt of L-aminoethylthiophosphoric (III; cystaphos; 800-1200 mg/kg) was injected intraperitoneally five minutes to 24 hours later. A slight increase in resistance to the amino thiols (I, III) was noted immediately after centrifugation, and a reliable increase in sensitivity to I and AET in 30 minutes; the reaction of the animals returned to normal in one hour. II, administered one day after overload, raised the animals' resistance. The animals' resistance to I rose with an increase in the intensity of the overloads.

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1/2 035 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--USE OF LUBRICANTS DURING THE CONTINUOUS PRODUCTION OF HOLLOW PANELS
-U-
AUTHOR-(03)-GURTOVNIK, I.G., ANTIPOV, V.V., KISELEV, V.N.
COUNTRY OF INFO--USSR
SOURCE--PLAST. MASSY 1970, (6), 74
DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS, BEHAVIORAL AND SOCIAL SCIENCES

TOPIC TAGS--HONEYCOMB STRUCTURE, GLASS CLOTH, PHENOL FORMALDEHYDE
MOLDING LUBRICANT, GRAPHITE, OLEIC ACID, INDUSTRIAL PRODUCTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3007/0705

STEP NO--UR/0131/70/0705

CIRC ACCESSION NO--AP0136144

UNCLASSIFIED

2/2 035

UNCLASSIFIED

PRO. 00513R002200210007-7

CIRC ACCESSION NO--AP0136144

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PRODUCTION OF POLYCONDENSATION
PANELS OF GLASS CLOTH IMPREGNATED WITH PHENOL SU32 PHENOL NO-B RESIN
REQUIRES SPECIALLY COATED STAMPING DIES OR THE INTERPOSITION OF
NONADHESIVE FILMS (CELLOPHANE OR POLYAMIDE). A 2-COMPONENT LUBRICANT
CONTG. OLEIC ACID AND GRAPHITE WAS FOUND ADEQUATE AND MORE ECONOMICAL
THAN THESE FILMS.

UNCLASSIFIED

1/2 017 UNCLASSIFIED PROCESSING DATE--11DEC70
TITLE--GEOMETRIC FORM OF PRESSURE VALVE PARTS -U-
AUTHOR--(C2)-ANTIPOV, V.V., GOGOLEV, B.A. **A**
COUNTRY OF INFO--USSR
SOURCE--TR. SARATOVSK. IN-TE MEKHANIZ. S. KH. (TRANSACTIONS OF THE SARATOV
REFERENCE--REFERATIVNYY ZHURNAL-DVIGATELI VNUITRENEGO SGORANIYA, NO 4,
DATE PUBLISHED-----70

SUBJECT AREAS--MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS--HIGH PRESSURE VALVE, WEAR RESISTANCE, GEOMETRIC FORM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FILE NO-----ED70/005031/E12 STEP NO--UP/0000/70/000700/0000/1167

CITE ACQUISITION--101414-00

2/2 017

UNCLASSIFIED

PROCESSING DATE 11/11/01

CIRC ACCESSION NO--AR0141980

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PARTS OF THE PRESSURE VALVE OF BY THE NZTA (EXPANSION UNKNOWN) ARE PRODUCED WITH DEVIATIONS FROM TECHNICAL CONDITIONS (EXCESS OF TAPER AND ELLIPTICALITY OF WORKING SURFACES). 50PERCENT OF VALVE PAIRS ARE MANUFACTURED WITH INCREASED GAPS, EXCEEDING ALLOWABLE TECHNICAL CONDITIONS. AS A RESULT OF WEAR OF PRESSURE VALVE PARTS, THE GAP AT THE BY PASS RELIEF SHOULDER IS INCREASED TO 0.048 MM AND THEIR MACROGEOMETRY IS SEVERELY DISTORTED. USE OF THE LATEST EQUIPMENT, INTRODUCTION OF PROGRESSIVE TECHNOLOGICAL PROCESSES, AND UPGRADING OF PRODUCTION ATTITUDES WILL MEAN MUCH IMPROVEMENT IN QUALITY OF PRECISION PARTS.

UNCLASSIFIED

USSR

UDC: 537.311

ANTONOV, YE. A., GNATYUK, L. N., STEPANOV, B. M., FILENKO, YU. I., and
TSARFIN, V. YA., Moscow

"Study of the Electric Explosion of Conductors by the Holography Method"

Moscow, Teplofizika Vysokikh Temperatur, Vol 10, No 6, Nov-Dec 72, pp 1219-1213

Abstract: Experiments have been reported on the registration of various stages of the explosion of conductors [EC] in air and in water by the usual dual beam system using holographic method of double exposure. From the data obtained the rate of the scattering of fragments has been determined to be about 150 m/sec, the velocity of the shock wave -- 500 m/sec, and the concentration of electrons in the plasma -- $N_{e_{max}} = 4.8 \cdot 10^{18} \text{ cm}^{-3}$. The holographic method is by far more

universal and promising than the photographic method for the registration of the phenomena accompanying EC. The size of the subject being studied, the ability to study EC independently of the specific luminescence of the object, no requirements placed on high quality optical elements in the systems forming radiation streams, all these aspects favor holography for the registration of rapid processes occurring during electric EC.

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USSR

UDC 539.388.1

ANTIPOV, Ye. A., MOZHAROVSKIY, N. S., (Kiev)

"Deformation and Rupture of Heat-Resistant Materials Under Conditions of Thermal Fatigue and Creep as Functions of the Nature of the Temperature Change Cycle and the Boundary Conditions"

Kiev, Problemy Prochnosti, No 8, 1972, pp 13-17.

Abstract: This article presents formulas allowing quantitative estimation of the influence of the nature of the temperature change cycle and boundary conditions accumulated plastic deformation and time to rupture of material. The studies of type 1Kh18N9T steel with thermal cycling sign-changing loading with the specimen at the maximum temperature of the cycle indicate that the hypothesis recommended by the authors of earlier works, based on the Coffin formula, is not always confirmed. The studies performed produce a quantitative estimation of the influence of variable thermal stresses resulting from cyclical temperature changes, the nature of the temperature change cycle and the boundary conditions on processes of deformation and rupture of heat-resistant materials under conditions of thermal fatigue and creep.

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USSR

UDC 629.178.3

MOZHAROVSKIY, N. S., ANTIPOV, Ye. A., Kiev

"Long Term Strength and Creep of Heat-Resistant Materials with Programmed Temperature Change"

Problemy Prochnosti, No 11, 1971, pp 3-9.

ABSTRACT: Experimental results are presented from the study of heat-resistant materials with programmed changes in temperature under conditions of creep and long term strength. Dependences are produced, allowing quantitative determination of the influence of the type of temperature cycle with a given program of temperature changes in a given range of stresses on the creep rate, and also to produce the long term strength in the case of any program of change of temperature with a given value of σ if the long term strength at the maximum and minimum cycle temperatures and the cyclical change in temperature are known.

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USSR

UDC 630.273.3

MOZHAROVSKIY, N. S., ANEPLOY, Ye. A. (Kiev), Kiev Polytechnical Institute

"The Plasticity and Destruction of Refractory Materials at Elevated Temperatures and Unsteady Loading"

Kiev, Problemy Prochnosti, No 12, December 1971, pp 3-8

Abstract: The present article gives results of a study of the behavior of refractory materials at elevated temperatures and unsteady loading according to various programs with a fixed value of stress change. Laws governing the plastic deformation and destruction of refractory materials during elevated temperatures and unsteady loading are presented. Analytic relationships are obtained, which make it possible to perform a quantitative evaluation of the influence of the nature of the unsteady loading cycle, with a given interval of change and a given temperature, upon the value of the accumulated plastic deformation all the way to destruction, as well as of the time elapsed until destruction is obtained. 1 table. 6 figures. 12 references.

1/1

USSR

UDC 539.388.1

ANTIPOV, YE. A., Kiev Polytechnical Institute

"The Effect of Mechanical Stress on Plastic Deformation Build-Up to the Point of Failure of the EI435 Alloy During Thermocyclic Loading"

Kiev, Problemy Prochnosti, No 6, Jun 70, pp 80-83

Abstract: The author presents a quantitative evaluation of the effect of statically applied, constant mechanical stresses on the magnitude of plastic deformation accumulation up to the point of failure of the EI435 alloy under thermocyclic loading occurring during cyclic variation of temperature ($550 \rightleftharpoons 870^{\circ}\text{C}$). Mechanical stress varied from 0 to 13.3 kg/mm^2 . The results show that variation in temperature stress and plastic deformation from cycle to temperature loading cycle, appearing as the result of temperature variation ($550 \rightleftharpoons 870^{\circ}\text{C}$), depends on the value of statically applied stress. A graph is given showing that cyclic deformation strengthening is the rule during the initial period of plastic deformation build-up, followed by stabilization.

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USSR

ANTIPOV, YE. A., et al., Problemy Prochnosti, No 6, Jun 70, pp 80-83

tion and, after accumulation of a given magnitude of plastic deformation, weakening processes. Intensity of deformation weakening and duration of stabilization for a given temperature depends on the magnitude of applied mechanical stress. A graph is also given showing variation in the sum plastic deformation (caused by cyclic temperature loading and creep) for the EI435 alloy at $T = 550 \pm 870^\circ \text{C}$. This shows that total plastic deformation accumulated during a given number of cycles depends on the magnitude of mechanical stress. The following expression is given for the relationship between plastic deformation accumulation up to the point of failure and the magnitude of mechanical stress:

$$(\tilde{S}_{na})_F = (\tilde{S}_{na})_P + A\sigma_{\infty}^n$$

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USSR

ANTIPOV, YE. A., et al., Problemy Prochnosti, No 6, Jun 70,
pp 80-83

where $(\bar{S}_{na})_p$ is plastic deformation accumulated up to the point of failure under conditions of thermomechanical loading; $(\bar{S}_{na})_t$ is plastic deformation accumulated up to the point of failure under conditions of thermocyclic loading; σ_{max} is the magnitude of constantly applied mechanical stress; and A and n are parameters depending on material (in the case of the EI435 alloy, $A = 0.00089 \text{ mm}^2/\text{kg}$ and $n = 1.53$ at $T = 550 \rightleftharpoons 850^\circ\text{C}$).

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USSR

UDC 621.785.784:669.721

TIKHOVA, N. M., BLOKHINA, V. A., ~~ANTIPOVA, A. P.~~, VASIL'YEVA, T. P., SOLOV'YEVA, G. G., All-Union Scientific Research Institute of Aviation Materials

"Effect of Prolonged Heating on Properties of the ML9 and ML10 Magnesium Alloys"

Moscow, Metallovedeniye, No 10, 1971, pp 73-76

Abstract: A study was made of the effect of prolonged heating, 0.5-30,000 hours, at 125-300°C, on the microstructure and mechanical properties of ML9 and ML10 heat-resistant cast magnesium alloys, developed on the base of the system Mg-Mn-Zr for continuous working at up to 250 and 300°C, respectively. The chemical compositions of the ML9 and ML10 alloys, their industrial heat treatment, and their mechanical properties in comparison with the widely used ML5 alloy are shown. The change of mechanical properties at temperatures up to 300°C is discussed. The structure and mechanical properties of the ML10 alloy, after heating at 200°C over periods of 1000 and 2500 hours are the same.

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USSR

TIKHOVA, N. M., et al, Metallovedeniye, No 10, 1971, pp 73-76

At higher temperatures (2500C), an intensive decomposition of grains of the solid solution occurs. A microstructural change of the ML9 alloy after heating over a period of 1000 hours at 2000C and 10 hours at 2500C was not observed. Heating at 3000C changed its microstructure substantially. 3 illustrations, 6 tables, 1 bibliographic reference

2/2

- 23 -

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USSR

UDC 669.721:669.794:539.434

TIKHOVA, N. M., SOLOV'YEVA, G. G., BLOKHINA, V. A., ANTIPOVA, A. P., VASIL'YEVA, T. P.

"Problem of the Theory of Alloying Magnesium with Rare Earth Metals and Yttrium"

V sb. Redkozemel'n. met i splavy (Rare Earth Metals and Alloys -- collection of works), Moscow, Nauka Press, 1971, pp 99-103 (from RZh-Metallurgiya, No 4, Apr 72, Abstract No 4I656)

Translation: A study was made of the causes of the positive effect of rare earth metals and yttrium on the high-temperature strength of Mg in comparison with alloys of the Mg-Al system. A photograph of the microstructures of the alloys as a function of composition and heat treatment conditions is included, and tables are given for mechanical properties, known alloys, and a new experimental alloy with yttrium. 2 illustrations and 2 tables.

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Polymers and Polymerization

USSR

UDC 541.64:547.35

KORSHAK, V. V., DZHASHI, L. V., ANTIPOVA, B. A., and SOSIN, S. L., Institute of Metal Organic Compounds, Acad. Sci. USSR

"Polymerization of Ferrocenylacetylene"

Moscow, Vysokomolekulyarnyye Soyedineniya, Vol 15, No 3, Mar 73, pp 521-526

Abstract: The study was aimed at the investigation of the conditions favoring linear polymerization of ferrocenylacetylene to yield polymers with a system of conjugated double bonds containing electron donating ferrocenyl substituents. This was achievable in presence of di-tert-butyl peroxide at 160° or with molten metallic sodium at 130°. The soluble polymers formed had molecular weight of 1400 and 2500 respectively. A mechanism has been suggested for the formation of polymeric structures of the ladder type through preliminarily formed dimers. These polymers exhibited strong EPR signals (10^{18} spin/g, $\Delta H = 10.8$ c).

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USSR

UDC 678.742.3-137.462.2:613.632

SMUROVA, YE. V., ZURLOVA, O. M., SOSIN, S. L., ANTIPOVA, E. A., NOVIKOVA, S. P., KARPINSKAYA, V. M.

"Interaction of Modified Polypropylene with Blood"

Moscow, *Plasticheskiye Massy*, No 4, 1972, pp 60-61

Abstract: The results of studying polymers with antithrombogenic properties are described. Data are presented on obtaining a sulfonated inoculated copolymer of polypropylene and polystyrene, and a study is made of the conditions permitting the polymer to be obtained which prevents the coagulation of blood on contact. With an increase in the active group content, the given copolymers cause significant hemolysis of the blood corpuscles. Iron ions must introduced into the copolymer to eliminate this phenomenon. The presence of iron ions in the sulfonated inoculated copolymer polypropylene+polystyrene+polyvinylferrocene promotes a noticeable reduction in the hemolysis of the red blood corpuscles on contact of the blood with copolymers without changing the antithrombogenic properties.

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1/2 020 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--LEVELING AND INHIBITING ACTION OF SOME ORGANIC COMPOUNDS IN NICKEL
PLATING ELECTROLYTES -U-
AUTHOR-(02)-KRUGIKOV, S.S., ANTIPOVA, L.M.
COUNTRY OF INFO--USSR
SOURCE--ZASHCH. METAL. 1970, 6(1) 81-4
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR
TOPIC TAGS--NICKEL PLATING, ELECTROLYTIC DEPOSITION, ELECTROLYTE,
ADIPONITRILE, QUINOLINE, AROMATIC SULFUR COMPOUND, HETEROCYCLIC OXYGEN
COMPOUND, IMIDE, BENZOIC ACID
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1983/0934 STEP NO--UR/0365/70/106/001/0081/0034
CIRC ACCESSION NO--AP0053858
UNCLASSIFIED

2/2 020

UNCLASSIFIED

PROCESSING DATE--12SEP70

CIRC ACCESSION NO--AP0053858

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ADIPONITRILE, SACCHARIN, COUMARIN, AND 8-SULFAQUINOLINE WERE ADDED UNDER IDENTICAL CONDITIONS TO SULFATE, SULFAMATE, AND FLUOROBORATE NI PLATING ELECTROLYTES AND THE ROTATING CATHODE POTENTIAL WAS MEASURED. INCREASE OF THE C.D. DECREASE THE INHIBITING ACTION OF ALL ADDITIVES. THE MAGNITUDE OF THE LEVELING ACTION VARIED WITH THE C.D. AND WAS ANALOGOUS FOR COUMARIN, SACCHARIN, AND ADIPONITRILE. THE EFFECTS OF CHANGES IN PH AND TEMP. ON THE LEVELING AND INHIBITING ACTIONS FOR ALL ADDITIVES WERE SIMILAR. THE RESULTS ARE IN AGREEMENT WITH THE ADSORPTION DIFFUSION THEORY OF LEVELING.

UNCLASSIFIED

USSR

UDC 577.1:615.7/9

ANTIPOVA, L. N.

"Comparative Characterization of Changes in Serum Proteins Induced by Various Doses of Magnesium Chlorate"

Tr. Turkm. med. in-ta (Works of Turkmen Medical Institute), 1971, Vol 15, pp 147-149 (from RZh-Biologicheskaya Khimiya, No 16, 25 Aug 71, Abstract No 16 F1549)

Translation: Rabbits were given magnesium chlorate (0.4 or 4 g/kg per day) with their food for 30 days. It was established that magnesium chlorate induced an increase in the amount of total protein in the blood serum. With a magnesium chlorate dose of 0.4 g/kg the albumin-globulin ratio increased 14.7% on the seventh day. A dose of 4 g/kg caused an increase in the amount of gamma globulins, which reached its maximum on the 30th day. With a dose of 0.4 g/kg, the beta globulin content reached a maximum on the second day and stayed at this level throughout the entire experimental period. The alpha albumin fraction revealed no changes. A hepatotoxic mechanism of these magnesium chlorate-induced changes is assumed.

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USSR

UDC 616.2-3,6.11-09.14

IL'YENKO, V. I., PLEKHOV, V. G., GORDON, M. A., ALEXANDROV, V. B., MELNYAKOVA, I. M. and ANTIFOVA, M. R., All-Union Scientific Research Institute of Influenza, Ministry of Public Health USSR, Leningrad

"Frequency of Development of Associated Infections Accompanying Acute Respiratory Diseases"

Moscow, Voprosy Virologii, No 1, 1973, pp 82-86

Abstract: Incidence and characteristics of viral infections were studied among 4,250 patients with clinically diagnosed influenza or acute respiratory disease. Out of 10 of them, for which the etiology had been established, 12.6% had associated infections, the percentage being somewhat higher for hospitalized than for outpatients, but no seasonal variations were noted. Analysis of the incidence of associated infections was related to viruses caused by particular pathogens indicated that most (61.7%) associated infections occurred among patients with virus-influenza type A and B (1.1%) with influenza type B. Post-influenza infections (1.5) were more frequent in children, particularly during epidemics. When influenza virus was not involved, associated infections were usually found to produce no severe symptoms.

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1/2 015 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--PRIMARY STAGES OF VISCOSE FIBER FORMATION -U-
AUTHOR-(04)-UKHANOVA, Z.V., PROZOROVA, G.YE., ANTIPOVA, R.V., PAPKOV, S.P.
COUNTRY OF INFO--USSR
SOURCE--KHIM. VOLOKNA 1970, (1), 32-4
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS
TOPIC TAGS--RAYON, ELONGATION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1984/1824 STEP NO--UR/0193/70/000/001/0032/0034
CIRC ACCESSION NO--AP0100398
UNCLASSIFIED

2/2 015

UNCLASSIFIED

PROCESSING DATE--13SEP70

CIRC ACCESSION NO--AP0100398

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE FORCED SYNERESIS OF RAYON (I) FIBERS (U., ET. AL., 1968) FORMED IN PPTN. BATHS CONTG. H SUB2 SO SUB4 80, NA SUB2 SO SUB4 120, AND ZNSO SUB4 0-150 G-L. WAS STUDIED. MAX. FORCED SYNERESIS RATE WAS REACHED WHEN THE STRETCHING RATIO WAS 1.25-1.6 (DEPENDING ON BATH COMPN.). THE TOTAL AMT. OF H SUB2 O SEPD. FROM THE FIBERS DUE TO NATURAL SYNERESIS WAS CONST. THE STRENGTH OF THE I YARN FORMED DURING ORIENTATIONAL ELONGATION WAS ESSENTIALLY INDEPENDENT OF THE COMPN. OF THE BATH. THUS, THE PRIMARY STAGES OF FORMATION OF I YARN PREVIOUSLY DISCUSSED WERE IN AGREEMENT WITH THE EXPTL. DATA.

UNCLASSIFIED

1/2 014 UNCLASSIFIED PROCESSING DATE--23.JCF70
TITLE--STABILITY OF POLYURETHANES -U-
AUTHOR--(05)-ANTIPOVA, V.F., MELAMED, V.I., PETROV, G.N., RAPPOPORT, L.YA.,
KOGAN, F.S.
COUNTRY OF INFO--USSR
SOURCE--PLAST. MASSY 1970, (2), 49-50
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS, CHEMISTRY
TOPIC TAGS--POLYURETHANE RESIN, CHEMICAL STABILITY, QUARTERNARY AMMONIUM
SALT, TRIETHYLAMINE, EPICHLORHYDRIN
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1997/0674 STEP NO--UR/0191/70/000/002/0049/0050
CIRC ACCESSION NO--AP0119582
UNCLASSIFIED

2/2 014

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0119582

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECTS OF DONOR ACCEPTOR ADDITIVES, E.G., N,N-DIMETHYLBENZYLAMINE (I) AND PHENYL GLYCIDYL ETHER (II), I AND GLYCIDOL, I AND EPICHLOROHYDRIN (III), AND II AND ET SUB3 N, ON THE AGING RESISTANCE OF CROSSLINKED POLYURETHANES (IV) WERE STUDIED. THE STABILITY OF IV WAS INVERSELY PROPORTIONAL TO THE TOTAL ADDITIVE CONTENT, REACHING A MIN. WHEN BOTH COMPONENTS WERE PRESENT IN AN EQUIMOLAR RATIO. THE STABILITY OF IV INCREASED WHEN III WAS USED, PRESUMABLY DUE TO THE FORMATION OF A STABLE QUATERNARY AMMONIUM COMPD.

UNCLASSIFIED

USSR

UDC 616.981.455-036.21(571.62)

BUSOYEDOVA, N. M., ANTIP'YEVA, O. A., LIPAYEV, V. M., KOZLOVSKAYA, O. L.,
CHERNYKH, P. A., FEOKISTOV, A. Z., GRIGOROV, V. I., CHIPANIN, V. L., and
KHAMAGANOV, S. A., Khabarovsk Anti plague Station

"Characteristics of Natural Foci of Tularemia in Khabarovskiy Kray"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 4, Apr 71,
pp 26-31

Abstract: A study conducted in the southern part of Khabarovskiy Kray indicated that natural foci of tularemia in forested and agricultural areas are different from those found in other parts of the USSR, because *Arvicola terrestris* and the common vole (*Microtus arvalis*) are absent, and hares and house mice are not numerous. Muskrats were found at only one focus. In forested regions the principal host is the large-toothed redbacked vole (*Clethrionomys rufocanus*), while the long-time reservoir and vectors are *I. persulcatus* and *H. concinna* ticks. Forest and field mice and the Siberian chipmunk were also infected. In agricultural regions the hosts are the northern redbacked and Far-Eastern vole (*Clethrionomys rutilus*; *Microtus fortis*), while *D. silvarum* and *H. concinna* ticks constitute the reservoir and vectors. A low epizootic level and still lower epidemic activity were typical for
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USSR

BUSOYEDOVA, N. M., et al., Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, Vol 48, No 4, Apr 71, pp 26-31

tularemia foci in Khabarovskiy Kray in the vicinity of the Amur River. The low rate of infection of human beings was due to the absence or small numbers of classical hosts (*Arvicola terrestris*, common vole, and hares) with which human beings may come into contact, the absence of active and widespread epizootics, and the predominance in agricultural areas of a rodent of the secondary host group (field mouse). Of seven cases of tularemia recorded, five were of the bubonic form. In one instance the source of infection was water containing *P. tularensis*, and in another instance the infection was apparently due to introduction of the agent into an eye by hands soiled with rodent feces. Testing of the population at known tularemia foci with tularin resulted in a positive allergic reaction in 1.2-2.5% of cases. The agglutination reaction was positive in 2.5-5.8%, and the passive hemagglutination reaction in 3.3-9.7% of cases. The data reported were obtained in an investigation conducted during 1956-1968.

2/2

USSR

UDC 621.387.255

SAMSONOV, G.V., DOLOVIA, T.V., KUTSENER, T.G., SELIKONOVA, V.P., ANTONIN, R.G.
[In-t problem materialovedeniya AN SSSR--Institute Of The Problems Of Material
Study, AS, USSR]

"Material For Production Of Semiconductor Igniters For Ionic Rectifiers"

USSR Author's Certificate No 274240, filed 9 June 69, published 24 Sept 70 (From
Rad-Elektronika i svyaz' prikladnaya, No 3, March 1971, Abstract No 34185)

Translation: Igniters for ionic rectifiers [ventil'], produced from a material,
in the composition of which boron nitride and boron carbide enter, have a high
ignition power and unstable parameters of current and voltage in the operating
procedure. With the object of an increase of the stability of the parameters
and a decrease of the ignition power, it is proposed to introduce niobium oxide
into the material of the igniters, while the components mentioned above are
taken in the following percentage ratio: boron nitride, 40-60; boron carbide, 20-
40; and niobium oxide, 10-20. The method of manufacturing the igniters from
the proposed materials involves hot pressing of a mixture of boron carbide,
boron nitride, and niobium oxide powders in graphite molds at $T = 1900-2300^\circ C$,
pressure 20 k/cm², and exposure time 2 min. The characteristics of the igniters
are presented. V.V.

1/1

- 91 -

Organophosphorus Compounds

USSR

UDC 541.6:547.1'118

RAYEVSKIY, O. A., DONSKAYA, Yu. A., KHALITOV, F. G., and ANTOKHINA, L. A.,
Institute of Organic and Physical Chemistry Imeni A. Ye. Arbuzov Academy
of Sciences USSR

"Conformation of Dialkyl(aryl)cyanomethylphosphine Oxides"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 6, Jun 73,
pp 1339-1341

Abstract: IR spectra of diethylcyanomethylphosphine oxide and diphenylcy-
anomethylphosphine oxide show that in solutions these compounds exist in
an equilibrium of two conformers. Under conditions of higher concentrations,
considerable association of molecules is noted. The dipole moments of these
compounds in gauche conformation, exhibiting the polar grouping P:O and C:N,
are considerably below the calculated values obtained from the vector
analysis, because of Coulom interaction.

1/1

USSR

UDC 542.91:547.1'118

ANTOKHINA, L. A., ALIMOV, P. I., Institute of Organic and Physical Chemistry
imeni A. Ye. Arbuzov, Soviet Academy of Sciences

"Some Reactions of Dichloromethylenamides of Dialkylphosphoric Acids"

Moscow, Izv. An SSSR: Ser. Khimicheskaya, No 3, Mar 73, pp 618-621

Abstract: The paper is a report on continuation of research on reactions of dichloromethylenamides of dialkylphosphoric acids with compounds containing a mobile hydrogen atom, specifically water, formamides and amines. It was found that the action of water on dichloromethylenamidophosphates in the presence of triethylamine produces dialkylphosphoric acid amides; when formamide reacts with the same dichlorides, the result is isocyanatophosphoric acid esters. When formamide, methylformamide or water is reacted with N-phosphorylated iminocarbamic acid chlorides, apparently the corresponding N-phosphorylated iminocarbamic acids are formed as intermediate products with subsequent rearrangement into N-phosphorylated ureas.

1/1

USSR

UDC 543.422.4:541.57:547.1'116

RAYEVSKIY, G. A., DONSKAYA, YU. A., ANTOKHINA, L. A.

"Infrared Spectra and Internal Rotation With Respect to the P-N Bond of Some N-Arylamidodichlorophosphates"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 11, 1973, pp 2497-2501

Abstract: A study was made of the infrared spectra of compounds with the general formula $H(RC_6H_5)NP(O)Cl_2$ where $R = p-OCH_3$ (I), H(II), p-Br (III) and p- NO_2 (IV). According to the infrared spectral data for solutions of N-(p-methoxyphenyl)amidodichlorophosphate and N-phenylamidodichlorophosphate, conformational equilibrium is characteristic at the same time as for N-(p-Br-phenyl)amidodichlorophosphate and N-(p- NO_2 -phenyl)amidodichlorophosphate, one steric structure is stabilized. It is proposed that the forms with shielding of the PO and NH bonds and their skew mutual arrangement participate in the equilibrium. The observed variations in the displacement of the conformational equilibrium as a function of the nature of the substitutions in the p-position of the benzene ring are explained by a different degree of conjugation of the nitrogen atom with the phosphorus part of the molecules.

1/1

- 25 -

USSR

UDC 542.91:547.1'118

ALIMOV, P. I., LEVKOVA, L. N., ANTOKHINA, L. A., and CHEPIANOVZ, I. V.,
Institute of Organic and Physical Chemistry Imeni A. Ye. Arbusov, USSR,
Academy of Sciences

"Reaction of Acid Chlorides with Dialkylphoric and Carboxylic Acid Amides"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 1, Jan 72,
pp 147-150

Abstract: In connection with data obtained earlier on the reactions between dialkylphosphoryl chlorides and various substituted and unsubstituted formations (P. I. ALIMOV et al), it was of interest to apply a similar approach in the case of reactions of acetyl, butyryl and benzoyl chlorides with diethylphoric acid amide, and also to the reaction of diethylphoryl chloride with acetic, butyric and benzoic acid amides, and also with formanilide.

In the case of diethylphoric acid amide, the reaction proceeds with the formation of acetamide phosphates; in the case of the other amides, and formanilide, with the formation of the ethyl ether of pyrophosphoric acid and the corresponding nitrils or phenylisonitril.

Reaction schemes, analytical data, etc., are given.

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- 44 -

UDC 616.981.455-036.21(571.62)

USSR

BUSOYEDOVA, N. M., ANTIP'YEVA, O. A., LIPAYEV, V. M., KOZLOVSKAYA, O. L.,
CHERNYKH, P. A., FEOKISTOV, A. Z., GRIGOROV, V. I., CHIPANIN, V. L., and
KHAMAGANOV, S. A., Khabarovsk Anti plague Station

"Characteristics of Natural Foci of Tularemia in Khabarovskiy Kray"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 4, Apr 71,
pp 26-31

Abstract: A study conducted in the southern part of Khabarovskiy Kray indicated that natural foci of tularemia in forested and agricultural areas are different from those found in other parts of the USSR, because *Arvicola terrestris* and the common vole (*Microtus arvalis*) are absent, and hares and house mice are not numerous. Muskrats were found at only one focus. In forested regions the principal host is the large-toothed redbacked vole (*Clethrionomys rufocanus*), while the long-time reservoir and vectors are *I. peromyscus* and *H. concinna* ticks. Forest and field mice and the Siberian chipmunk were also infected. In agricultural regions the hosts are the northern redbacked and Far-Eastern vole (*Clethrionomys rutilus*; *Microtus fortis*), while *D. silvarum* and *H. concinna* ticks constitute the reservoir and vectors. A low epizootic level and still lower epidemic activity were typical for
1/2

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USSR:

BUSOYEDOVA, N. M., et al., Zhurnal Mikrobiologii, Epidemiologii i Immunologii, Vol 48, No 4, Apr 71, pp 26-31

tularemia foci in Khabarovskiy Kray in the vicinity of the Amur River. The low rate of infection of human beings was due to the absence or small numbers of classical hosts (*Arvicola terrestris*, common vole, and hares) with which human beings may come into contact, the absence of active and widespread epizootics, and the predominance in agricultural areas of a rodent of the secondary host group (field mouse). Of seven cases of tularemia recorded, five were of the bubonic form. In one instance the source of infection was water containing *P. tularensis*, and in another instance the infection was apparently due to introduction of the agent into an eye by hands soiled with rodent feces. Testing of the population at known tularemia foci with tularin resulted in a positive allergic reaction in 1.2-2.5% of cases. The agglutination reaction was positive in 2.5-5.8%, and the passive hemagglutination reaction in 3.3-9.7% of cases. The data reported were obtained in an investigation conducted during 1956-1968.

2/2

USSR

UDC 621.387.233

SAMSONOV, G.V., DUBOVIK, T.V., KUTSENOK, T.G., SEMENOVA, V.P., ANTONKHIN, R.G.
[In-t problem materialovedeniya AN SSSR--Institute Of The Problems Of Material
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USSR Author's Certificate No 274240, filed 9 June 69, published 24 Sept 70 (from
RZh--Elektronika i yeye primeneniye, No 3, March 1971, Abstract No 3A185)

Translation: Igniters for ionic rectifiers [ventil'], produced from a material,
in the composition of which boron nitride and boron carbide enter, have a high
ignition power and unstable parameters of current and voltage in the operating
procedure. With the object of an increase of the stability of the parameters
and a decrease of the ignition power, it is proposed to introduce niobium oxide
into the material of the igniters, while the components mentioned above are
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the proposed materials involves hot pressing of a mixture of boron carbide,
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1/1

- 91 -

Organophosphorus Compounds

USSR

UDC 541.6:547.1'118

RAYEVSKIY, O. A., DONSKAYA, Yu. A., KHALITOV, F. G., and ANTOKHINA, L. A.,
Institute of Organic and Physical Chemistry Imeni A. Ye. Arbuzov Academy
of Sciences USSR

"Conformation of Dialkyl(aryl)cyanomethylphosphine Oxides"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 6, Jun 73,
pp 1339-1341

Abstract: IR spectra of diethylcyanomethylphosphine oxide and diphenylcy-
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an equilibrium of two conformers. Under conditions of higher concentrations,
considerable association of molecules is noted. The dipole moments of these
compounds in gauche conformation, exhibiting the polar grouping P:O and C:N,
are considerably below the calculated values obtained from the vector
analysis, because of Coulom interaction.

1/1

USSR

UDC 542.91:547.1'118

ANTOKHINA, L. A., ALIMOV, P. I., Institute of Organic and Physical Chemistry
imeni A. Ye. Arbuzov, Soviet Academy of Sciences

"Some Reactions of Dichloromethylenamides of Dialkylphosphoric Acids"

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Abstract: The paper is a report on continuation of research on reactions of dichloromethylenamides of dialkylphosphoric acids with compounds containing a mobile hydrogen atom, specifically water, formamides and amines. It was found that the action of water on dichloromethylenamidophosphates in the presence of triethylamine produces dialkylphosphoric acid amides; when formamide reacts with the same dichlorides, the result is isocyanatophosphoric acid esters. When formamide, methylformamide or water is reacted with N-phosphorylated iminocarbamic acid chlorides, apparently the corresponding N-phosphorylated iminocarbamic acids are formed as intermediate products with subsequent rearrangement into N-phosphorylated ureas.

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USSR

UDC 543.422.4:541.57:547.1'118

RAYEVSKIY, O. A., DONSKAYA, YU. A., ANTOKHINA, L. A.

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1/1

- 25 -

USSR

UDC 542.91:547.1'118

ALIMOV, P. I., LEVKOVA, L. N., ANTOKHINA, I. A., and CHEPLANOVZ, I. V.,
Institute of Organic and Physical Chemistry ~~ISSN~~ A. Ye. Arbuzov, USSR,
Academy of Sciences

"Reaction of Acid Chlorides with Dialkylphoric and Carboxylic Acid Amides"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 1, Jan 72,
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Abstract: In connection with data obtained earlier on the reactions between dialkylphosphoryl chlorides and various substituted and unsubstituted formations (P. I. ALIMOV et al), it was of interest to apply a similar approach in the case of reactions of acetyl, butyryl and benzoyl chlorides with diethylphoric acid amide, and also to the reaction of diethylphoryl chloride with acetic, butyric and benzoic acid amides, and also with formanilide.

In the case of diethylphoric acid amide, the reaction proceeds with the formation of acetylamide phosphates; in the case of the other amides, and formanilide, with the formation of the ethyl ether of pyrophosphoric acid and the corresponding nitryls or phenylisonitryl.

Reaction schemes, analytical data, etc., are given.

1/1

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1/2 018 UNCLASSIFIED PROCESSING DATE--11DEC70
TITLE--DIAGNOSTIC SIGNIFICANCE OF DETERMINING LEUKOCYTE AND BLOOD SERUM
ALKALINE PHOSPHATASE IN SOME DISEASES OF THE DIGESTIVE APPARATUS -U-
AUTHOR--ANTOKHINA, L.I.
COUNTRY OF INFO--USSR
SOURCE--SCV MED 33(3): 91-94. 1970.
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--BLOOD SERUM, PHOSPHATASE, LEUKOCYTE, DIGESTIVE SYSTEM DISEASE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY FICHE NO----FD70/605015/C03 STEP NO--UR/0399/70/033/003/0091/0094
CIRC ACCESSION NO--AP0140567
UNCLASSIFIED

2/2 018

UNCLASSIFIED

PROCESSING DATE--11DEC70

CIRC ACCESSION NO--APC140567

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ACTIVITY OF LEUCOCYTE ALKALINE PHOSPHATASE WAS INVESTIGATED IN 103 AND THAT OF THE BLOOD SERUM IN 178 PATIENTS WITH LIVER, BILE DUCT AND CHRONIC INTESTINAL DISEASE. IN OBSTRUCTIVE JAUNDICE, CHRONIC HEPATITIS AND LIVER CIRRHOSIS THE LEUCOCYTE AND BLOOD SERUM ACTIVITY OF THE ENZYME INCREASED. IN PATIENTS WITH CHRONIC CHOLECYSTITIS THE ACTIVITY OF THE SERUM ALKALINE PHOSPHATASE REMAINED NORMAL, WITH AN APPRECIABLE RISE IN THE LEUCOCYTES. INVERSE CORRELATIONS OF PHOSPHATASE FIGURES WERE RECORDED IN CASES OF EPIDEMIC HEPATITIS, WHERE, WITH THE NORMAL ACTIVITY OF LEUCOCYTE ALKALINE PHOSPHATASE, THE SERUM INDEX WENT UP AS THE COURSE OF THE DISEASE GAINED IN SEVERITY. IN CHRONIC INTESTINAL DISEASE THE SCRUTINY OF THE LEUCOCYTE ENZYME IS OF DIAGNOSTIC IMPORTANCE. FACILITY: PETROZAVODSK UNIV., PETROZAVODSK, USSR.

UNCLASSIFIED

USSR

UDC: 621.372.831.4-762

KURILOV, G. V., SAZONOV, V. P., ANTOKHINA, N. V.

"On the Resonance Frequencies of Modes in Energy Coupling Windows of the 'Jar' Type"

Elektron. tekhnika. Nauchno-tekhn. sb. Elektron. SVCh (Electronic Technology. Scientific and Technical Collection. SHF Electronics), 1970, vyp. 9, pp 36-44 (from RZh-Radiotekhnika, No 12, Dec 70, Abstract No 12B219)

Translation: The jar system used in SHF power tubes for coupling out energy is a flat dielectric window in the middle of a circular waveguide connected on both sides to rectangular waveguides. A disadvantage of the system is the possibility of breakdown of the window on resonance frequencies of modes allowed by the system; this requires proper selection of the working range. An important factor which has its effect on resonance frequencies is the reactivity of the coupling between circular and rectangular guides. This effect is analyzed. It is shown that such a coupling eliminates degeneration of the dominating mode, resulting in additional resonance. The reactivity of the junction shifts resonances of H modes toward shorter waves. Recommendations are given on selecting the working range. Eight illustrations, one table, bibliography of five titles. N. S.

1/1

1/2 030 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--PLATINUM BROMONITROMONODAMMINES. REACTION OF CIS-PT(NH SUB3) SUB2(NO
SUB2) SUB2 WITH HYDROGEN BROMIDE -U-
AUTHOR--(02)-MURAVEISKAYA, G.S., ANTOKOLSKAYA, I.I.

COUNTRY OF INFO--USSR

SOURCE--ZH. NEORG. KHIM. 1970, 15(3), 728-34

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--IRRADIATION EFFECT, UV IRRADIATION, CHEMICAL SYNTHESIS, AMINE
DERIVATIVE, PLATINUM COMPLEX, BROMINE COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1993/0733

STEP NO--UR/0078/70/015/003/0728/0734

CIRC ACCESSION NO--AP0113597

UNCLASSIFIED

2/2 030

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0113597

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. WHEN CIS-PT(NH SUB3) SUB2(NO SUB2) SUB2 REACTS WITH HX (X EQUALS CL OR BR) THE PT(II) IS OXIDIZED TO PT(IV) ANALOGOUS TO THE REACTION WITH X SUB2. THE OXIDN. PROCEEDS VIA AN INNER SPHERE OXIDN. MECHANISM INVOLVING NH SUB3 LIGANDS. TRANSITION PRODUCTS, BROWN GREEN CRYST. (PT(NH SUB2 BR)NO SUB2 BR SUB2.25) PRIME NEGATIVE AND BRIGHT RED CRYST. PT(NH SUB2 BR)NO SUB2 BR SUB3 WERE SEPD. IT IS ALSO POSSIBLE THAT THE REACTION PROCEEDS VIA A PT-NOBR INTERMEDIATE. PREPN. OF CSPT(NH SUB3)(NO SUB2) BR SUB2 AND CSPT(NH SUB3) NO SUB2 BR SUB4 IS DESCRIBED. CSPTNH SUB3 BR SUB3 FORMED WHEN CSPT(NH SUB3)(NO SUB2) BR SUB3.25 WAS IRRADIATED BY UV LIGHT.

UNCLASSIFIED

USSR

Atomic and Nuclear

UDC: None

ANTOKOL'SKIY, G. L., CHARNAYA, Ye. V., and SHUTILOV, V. A.

"The 'Defect' Mechanism of the Nuclear Spin-Phonon Connection"
Leningrad, Fizika tverdogo tela, No 11, 1973, pp 3250-3259

Abstract: Noting discrepancies between theory and experiment in the study of the spin-phonon connection in nuclei with a spin greater than $\frac{1}{2}$, the authors find that these discrepancies can be explained by the assumption that in the saturation of the quadrupole transitions of such nuclei by ultrasonics, there is a special mechanism which opposes the effect of relative ion shift in the acoustical wave. This type of mechanism can be associated with lattice defects that are present in every real crystal. Near these defective points, in dynamic deformations of the crystal, strong electric-field gradients may arise which act on the quadrupole moments of adjoining nuclei. The perturbations from these gradient centers are then propagated throughout the entire spin system by spin diffusion. Based on the defect mechanism, expressions for the reaction times for various types of crystal is presented. Also shown is a curve for the quadrupole shift of resonant frequencies as a

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USSR

UDC: None

ANTOKOL'SKIY, G. L., et al, Fizika tverdogo tela, No 11, 1973,
pp 3250-3259

function of the distance from the defect point.

2/2

- 23 -

USSR

UDC 8.74

ANTOMONOV, YU. G.

"Construction of the Theory of Organizing Biosystems"

V sb. Biol., med. kibernet. i bionika (Biological and Medical Cybernetics and Bionics — collection of works), Kiev, 1971, pp 3-11 (from RZh-Kibernetika, No 9, Sep 72, Abstract No 9V689)

No abstract

1/1

- 88 -

1/2 G13 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--SELECTION OF AN EFFICIENT SCHEME FOR DRYING SYNTHETIC DETERGENTS
-U-
AUTHOR--(04)--PARCNYAN, V.KH., KAFIYEV, N.M., SHMIDT, A.A., ANTON, A.G.
COUNTRY OF INFO--USSR
SOURCE--MALSU-ZHIR. PROM. 1970, 36(1), 25-8
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY, MECH., IND., CIVIL AND MARINE ENGR
TOPIC TAGS--DETERGENT, DRYING OVEN, BOND ENERGY, WATER, SULFATE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3002/0450 STEP NO--UR/9085/70/036/001/0025/0028
CIRC ACCESSION NO--AP0128020
UNCLASSIFIED

2/2 013

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIR ACCESSION NO--AP0128020

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. H SUB2 O, DETERGENT BOND ENERGY WAS
DETD. FOR 2 DETERGENTS CNTG. 25PERCENT ALKYL SULFATE (I) AND
TETRAPROPYLENEBENZENESULFONATE (II) RESP. HIGHER VALUES OF BOND ENERGY
WERE FOUND FOR I THAN FOR II. THE ADDN. OF 15PERCENT NA SUB2 CO SUB3 TO
I AND II INCREASED THE BOND ENERGY IN THE ENTIRE REGION STUDIED. AS THE
BOND ENERGY PER UNIT AMT. OF H SUB2 O INCREASES WITH DECREASING H SUB2 O
CONTENT, IT IS RECOMMENDED THAT ADDNL. HEAT ENERGY BE SUPPLIED TO THE
DRYING AIR 3.5-4.0 M FROM THE CONICAL PART OF THE DRYING CHAMBER.
FACILITY: MOSK. FILIAL VNIIZHA, MOSCOW, USSR.

UNCLASSIFIED

"APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R002200210007-7

APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R002200210007-7"

1/2 030

UNCLASSIFIED

PROCESSING DATE--16OCT70

TITLE--PLATINUM BROMONITROMONODAMMINES. REACTION OF CIS-PT(NH SUB3) SUB2(NO
SUB2) SUB2 WITH HYDROGEN BROMIDE -U-
AUTHOR-(02)-MURAVEISKAYA, G.S., ANTOKOLSKAYA, I.I.

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DERIVATIVE, PLATINUM COMPLEX, BROMINE COMPOUND

CONTROL MARKING--

DOCUMENT CLASS--UNCLASSIFIED

PROXY KEY/PRAM--1987/17/17

CIRC ACCESSION NO--1987/17/17

UNCLASSIFIED

Atomic and Nuclear

USSR

USSR: None

ANTOKOL'SKIY, G. L., CHARNAYA, Ye. V., and SHUTIKOV, V. A.

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2/2 030

UNCLASSIFIED

PROCESSING DATE--19870

CIRC ACCESSION NO--AP0112597

"APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R002200210007-7"

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. WHEN CIS-PT(NH SUB3) SUB2(NO SUB2) SUB2 REACTS WITH HX (X EQUALS CL OR BR) THE PT(II) IS OXIDIZED TO PT(IV) ANALOGOUS TO THE REACTION WITH X SUB2. THE OXIDN. PROCEEDS VIA AN INNER SPHERE OXIDN. MECHANISM INVOLVING NH SUB3 LIGANDS. TRANSITION PRODUCTS, BROWN GREEN CRYST. (PT(NH SUB2 BR)NO SUB2 BR SUB2.25) PRIME NEGATIVE AND BRIGHT RED CRYST. PT(NH SUB2 BR)NO SUB2 BR SUB3 WERE SEPD. IT IS ALSO POSSIBLE THAT THE REACTION PROCEEDS VIA A PT-NOBR INTERMEDIATE. PREPN. OF CSPT(NH SUB3)(NO SUB2) BR SUB2 AND CSPT(NH SUB3) NO SUB2 BR SUB4 IS DESCRIBED. CSPTNH SUB3 BR SUB3 FORMED WHEN CSPT(NH SUB3) NO SUB2) BR SUB3.25 WAS IRRADIATED BY UV LIGHT.

UNCLASSIFIED

USSR

UDC: None

ANTOKOL'SKIY, G. L., et al, Fizika tverdogo tela, No 11, 1973,
pp 3250-3259

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2/2

USSR

UDC 8.74

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TITLE--SELECTION OF AN EFFICIENT SCHEME FOR DRYING SYNTHETIC DETERGENTS
-U-
AUTHOR--(04)-PARCNYAN, V.KH., KAFIYEV, N.M., SHMIDT, A.A., ANTON, A.G.
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ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. H SUB2 O, DETERGENT BOND ENERGY WAS
DETD. FOR 2 DETERGENTS CONTG. 25PERCENT ALKYL SULFATE (I) AND
TETRAPROPYLENEBENZENESULFONATE (II) RESP. HIGHER VALUES OF BOND ENERGY
WERE FOUND FOR I THAN FOR II. THE ADDN. OF 15PERCENT NA SUB2 CO SUB3 TO
I AND II INCREASED THE BOND ENERGY IN THE ENTIRE REGION STUDIED. AS THE
BOND ENERGY PER UNIT AMT. OF H SUB2 O INCREASES WITH DECREASING H SUB2 O
CONTENT, IT IS RECOMMENDED THAT ADDNL. HEAT ENERGY BE SUPPLIED TO THE
DRYING AIR 3.5-4.0 M FROM THE CONCIAL PART OF THE DRYING CHAMBER.
FACILITY: MGSK. FILIAL VNIIZHA, MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC 621.355.8.035.2

ANTONENKO, B. A., and SAGOYAN, L. N.

"Description of the Process of Impregnating Metal-Ceramic Nickel-Oxide Electrodes of Alkali Batteries by a Leveling of Experiments Method"

Sb. rabot. no khim. istochnikam toka. Vses. n.-n akkumulyator. in-t (collection of Works on the Chemical Source of Current, All-Union Scientific Study Institute for Storage Batteries.), Vyp 7, 1972, pp 34-40 (from Referativnyy Zhurnal -- Khimiya, No 8(II), 1973, Abstract No 81233)

Translation: A mathematical description is given for the process of impregnating the metal-ceramic nickel-oxide electrodes of alkali batteries in the form of two linear regression equations. The effects derived during the course of the process are described. The optimum conditions were determined which resulted in an intensification of the impregnation and increasing yield of the desired product. (Author's abstract)

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USSR

UDC 539.3

ANTONENKO, E. V., Saratov

"Critical Pressure and Frequency of Oscillations of Cylindrical Shells with Edges Elastically Fixed in the Axial Direction"

Kiev, Prikladnaya Mekhanika, Vol 18, No 8, Aug 73, pp 45-49.

Abstract: Closed circular orthotropic and constructively orthotropic cylindrical shells are studied with 8 versions of boundary conditions. The upper critical radial pressure and natural frequency of axisymmetrical oscillations are expressed through parameter α , which depends on the coefficient of the differential equation and the boundary conditions. The differential equation of stability and oscillations is produced using hypotheses from the engineering theory of shells. Transcendental equations are produced for determination of parameter α . The results of solution of the equations, produced on a "Dnepr" computer, are presented in graphic and tabular form.

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USSR

UDC: 8.74

KOZHURIN, F. D., ~~ANTONENKO, M. G.~~, and SHVETS, N. Ya.

"Organization of Memory for Searching by Signs"

Moscow, V sb. Tsifr. vychisl. tekhnika i programmir. (Digital Computer Techniques and Programming--collection of works) "Sov. Radio," No 7, 1972, pp 68-75 (from RZh--Matematika, No 8, 1972, Abstract No 8V622)

Translation: This article is devoted to problems in the organization of memory with a subsequent beginning in searching for an object from signs.

A method of "segments" is found through which the search can be made from a maximum possible group of signs. It is shown that the proposed method is quite convenient; an evaluation of the method is made through the use of a redundancy factor proposed by the author. The method of segments is advantageously used in cases in which the volume of data regarding the object that can be preserved is much greater than the volume of sign information regarding the object. Authors' abstract.

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USSR

UDC: 8.74

KOZHURIN, F. D., ANTONENKO, M. G., SHVETS, N. Ya.

"Organization of a Memory for Access by Distinctive Features"

V sb. Tsifr. vychisl. tekhnika i programmir. (Digital Computer Technology and Programming--collection of works), vyp. 7, Moscow, "Sov. radio", 1972, pp 68-75 (from RZh-Kibernetika, No 8, Aug 72, Abstract No 8V622)

Translation: The article deals with problems of organizing a memory with sequential access for retrieving an object by distinctive features.

The method of "segments" is proposed which enables retrieval in accordance with the most possible group of features. It is shown that the proposed method is quite convenient; an evaluation of this method is given by means of a coefficient of redundancy proposed by the author. It is advisable to use the method of segments in cases where the volume of the stored data on objects appreciably exceeds the volume of distinctive feature information on these objects. Authors' abstract.

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USSR

UDC 681.3.06:51

ANTONENKO, M. G., KOZHURIN, F. D., SHIVETS, N. Ya., ZATINATSKIY, P. A.,
BALANDINA, Zh. I.

"One Method for Input of Information Files to Data Processing Systems"

Tsifr. Vychisl. Tekhnika i Programmir. [Digital Computer Equipment and Programming -- Collection of Works], No 6, Moscow, Sovetskoye Radio Press, 1971, pp 161-168, (Translated from Referativnyy Zhurnal, Kibernetika, No 6, 1971, Abstract No 6 V605 by the authors).

Translation: Problems are analyzed, related to the organization and input of information files to modern data processing systems. One method of external sorting is presented -- the method of characteristic phrases. Two algorithms are presented, based on the utilization of the ideas of the method of characteristic phrases. Formulas are produced for calculation of the number of runs through a file being sorted. The area of effective utilization of the algorithms is defined.

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Agriculture

JSSR

UDC 595.754:614.449(470.44)

GRIVANOV, K. P., and ANTONENKO, O. P., Scientific Research Institute for Agriculture of the Southeast, Saratov

"Biological Bases for Integrated Control of the Stink-Bug (*Eurygaster integriceps*) in the Saratov District"

Moscow, Zoologicheskii Zhurnal, Vol 50, No 10, 1971, pp 1487-1496

Abstract: In Saratov, spring wheat suffers the most from infestation by stink-bugs. The danger is worst when infestation occurs during the tillering stage, since the plant cannot compensate for the destruction of the main stalk by strengthening the development of the side stems. The stink-bug population varies and depends primarily on weather conditions and secondarily on the species and characteristics of the plant. Chemical treatment with organo-phosphorous insecticides is very harmful to the natural enemies of the stink-bug, especially during the spring. The primary natural enemies of the stink-bug are the egg-eaters of the order hymenoptera, the parasitic Phasiidae, the predators on larvae and eggs consisting of 10 species of the family Carabidae, the two genera Formicidae, the species Staphylinidae, Anthicidae, the larva of *Chrysopa*, spiders of the families Lycosidae, Arctopidae, Theridiidae, Thomisidae, and beetles of the genera Pterostichus, Dolichus, and Harpalus. Chemical

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USSR

GRIVANOV, K. P., and ANTONENKO, O. P., Zoologicheskiy Zhurnal, Vol 50, No 10, 1971, pp 1487-1496

treatment in mid-May does not harm the egg-eaters still in a pupate stage, but treatment only two weeks later, when they begin to fly, significantly decreases their number. Similarly, treatment that coincides with the summer imago lowers the population of Phasiidae. Thus spring chemical treatment should be conducted at the larval stage so as to increase the effectiveness of the entomophages of the stink-bug.

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USSR

UDC 621.355.8.035.2

ANTONENKO, P. A., BARSUKOV, V. Z., KRAPIVNYI, N. G., SAGOYAN, L. N.

"Study of a Cermet Nickel-Nickel Oxide Electrode. Report I. Structural Characteristics of the Electrode"

Khim. tekhnologiya. Resp. mezhved. temat. nauch.-tekhn. sb. (Chemical Technology. Republic Interdepartmental Thematic Scientific and Technical Collection), No 24, pp 96-98 (from RZh-Khimiya, No 12, Jun 72, Abstract No 12L265)

Translation: A study was made of a cermet nickel-nickel oxide electrode of an alkaline storage battery comprising two porous phases. The dependence of the effective porosity of the base of the electrode on the amount of filler and its thickness was investigated. It was established that with the existing technological process of depositing Ni(OH)_2 in the pores of the base, the latter occupies only 57% of the pore space.

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